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[KR/KR]; #302 Daeyoung-Hightvill, 296-8 Junggok-dong, Kwangjin-ku, Seoul 143-220 (KR).

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(74) Agents: SON, Min et al.; 17th Floor, City Air Tower, 159-9 Samsung-dong, Gangnam-gu, Seoul 135-973 (KR).

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(71) Applicant (for all designated States except US): VI-ROBACT, INC. [KR/KR]; 2nd Floor, SeongbukTrism B/D, 46-1 Hawolgok 2-dong, Seongbuk-gu, Seoul 136-865 (KR).

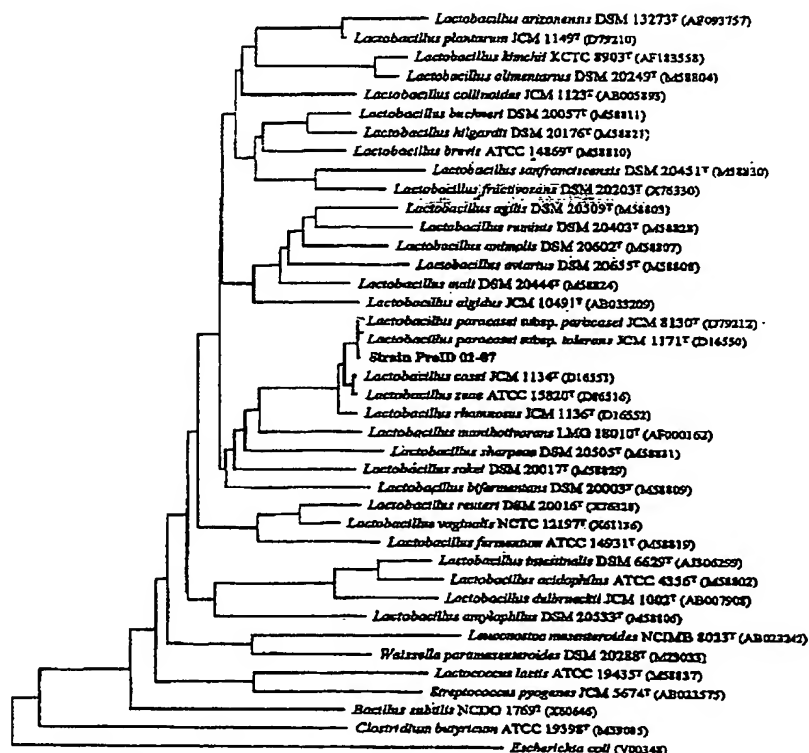
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(72) Inventor; and

(75) Inventor/Applicant (for US only): PARK, Soon-Duck

[Continued on next page]

(54) Title: NOVEL LACTOBACILLUS SP. STRAIN AND USE THEREOF



0.01

(57) Abstract: The present invention relates a novel Lactobacillus sp. Strain and use thereof. More specifically, the present invention relates to a novel Lactobacillus sp. Strain, Lactobacillus paracasei, isolated and identified from Kimchi fermentation liquid and uses thereof as probiotics, feeding additive, deodorizing agent and food additive. Lactobacillus paracasei of the present invention has good acid-resistance, bile acid-resistance and stability in the human body, has pathogenic bacteria inhibiting activity, increases numbers of beneficial bacteria by changing intestinal microflora and decreases diarrhea incidence, deodorizes offensive odor, and has effects of softening and deodorizing in meat and fish.

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(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR02/00914

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 C12N 1/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C12N 1/20, 1/00 : C12P 7/56 : A23K 1/00, 1/16, 1/165

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Patents and Applications for Inventions since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubMed, Delphion, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| A | WO 9929833 (ARLA EKONOMISK FORENING) Jun 1999 See the claims | 1, 3-12 |
| A | KR 1020000047065 (HO-GOON PARK) Jul 2000 See the whole document | 1, 3, 4 |
| A | Martha I. Alvarez-Olmos and Richard A. Oberhelman "Probiotic Agents and Infectious Diseases: A Modern Perspective on a Traditional Therapy" Clinical Infectious Diseases vol.32:1567-1576, May 2001 See the abstract | 1, 3-12 |
| A | Gorbach SL. "Probiotics and gastrointestinal health" Am J Gastroenterol vol 95(1 Suppl):S2-4, Jan 2001 See the abstract | 1, 3-12 |

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

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"&" document member of the same patent family


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Authorized officer

AHN, Mi Jung

Telephone No. 82-42-481-5593



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR02/00914

Box 1 Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 2
because they relate to part of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
Due to the broad and indefinite scope, the meaningful search for claim 2 is not possible to be carried on.

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II **Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Search Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be established without effort justifying an additional fee, this Authority did not invite payment of any addition fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/KR02/00914

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---------------------|--|---|
| WO 9929833A1 | June 17, 1999 | EP 1036160A1 CA 2313245AA JP 20015260T2 PL 341010A1 NO 20002919A | Sep 20, 2000 Jun 17, 1999 Dec 18, 2001 Mar 12, 2001 Aug 8, 2000 |
| KR 1020000047065 | July 25, 2000 | None | |